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RESEARCH ARTICLE – QUALITY MANAGEMENT

Analysis of the Size of the Gap in the Application of Total Quality Management Requirements a Comparative Study Between Ibn Al-Bitar Governmental Hospital and Al-Zaytoun Private Hospital

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Article Info.	Abstract
<i>Article history:</i>	The study aims to determine and evaluate the size of the gap in the application of the requirements of total quality management in the health sector in Iraq ,which was represented by the requirements (Senior management support, customer focus, work teams, training, continuous improvement,) in government and private hospitals by analyzing results Diagnosis of the strengths, weaknesses and comparison between the researchers.
Received 20 June 2024	As the study problem, was that there is a weakness, in the application of the requirements of comprehensive quality management in a manner that does not provide employees and patients with appropriate support and reflects negatively on the quality of the hospital's outputs, as well as poor knowledge of what the requirements are and what are the advantages achieved for hospitals that are exempted and those working in them when approved.
Accepted 27 October 2024	The study adopted the comparative approach (A comparative Study) between governmental and private hospitals that were chosen as spatial boundaries to conduct the study, and the analysis list (Checklist) was used as a tool to collect data by relying on personal interviews, observation, field coexistence, and the use of the analysis list with the intention of accessing scientific facts. As for the study sample, it was an intentional sample from the government hospital, which is Ibn Al-Bitar Governmental Hospital, and Al-Ahly Hospital, which is Al-Zaytoun Special Hospital. Discussed in Baghdad .The results showed that there is a weakness in the application of quality management requirements in both governmental and private hospitals.
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Keywords: Total Quality Management; Total Quality Management Requirements; Senior Management Support; Customer Focus; Work Teams, Training; Continuous Improvement.

1. Introduction

Today's topic is total quality management. It's one of the topics that has received wide attention in business organizations of all kinds and sizes, and in the hospital sector specifically, because the philosophy of total quality management focuses on the customer. And how it can meet his growing needs and desires, and from this point of view, some organizations, including hospitals, resorted to adopting some administrative methods that have proven effective in improving services, including the concept of total quality management, which aims to build a deep base on quality and gain satisfaction of Client(s) [1]. As a result of the many changes that characterize the governmental and private health and medical sectors and the intense competition they include, they have constantly looked for ways to help them achieve a competitive advantage, and perhaps the most prominent of these ways is total quality management, as it is a source of continuous improvement. The strengthening of senior management in determining its strategic direction ensures its growth within the circle of competition and the preservation of market share [2]. One of the results of the tremendous development in technology, and as a result of the increasing needs of customers in light of intense competition, the primary goal of organizations has become to satisfy the customer and surpass their desires. This can only be achieved through the successful application of contemporary management methods and tools, including total quality management [3].

The research discussed the extent to which quality management requirements are applied, providing staff and patients alike with the appropriate support to achieve quality outputs. The study also aimed to analyze the gap between hospitals in the public and private sectors through the application of total quality management requirements. Through a presentation of the requirements of total quality management represented in (senior management support, training, work teams, customer focus, and continuous improvement). The study adopted a comparison method between Ibn al-Bitar al-Ghawari and Al-Zaytoun National Hospital. Using checklists. The research starts from the problem of working to determine the size of the gap in the application of total quality management requirements between hospitals. The research aims to identify the differences in the level of application of these requirements, between the hospitals under research and highlights the importance of research in the high level of awareness among the senior management of hospitals of the importance of applying internationally approved requirements, because of their actual impact on building an effective special system for quality management that meets the requirements of all concerned. The study adopted a comparative study between government and private hospitals that were selected as spatial boundaries for conducting the study, and a checklist was used. As a tool for collecting data based on personal interviews, observation, field experience, and the use of the analysis list with the intention of reaching scientific facts, the research

reached a set of conclusions, the most important of which is the existence of you in the application of quality management requirements in both government and private hospitals.

2. Previous Studies

A number of previous Arab and foreign studies on the variables of the study will be presented in Table 1.

Table 1. List of previous studies

The extent to which e-learning is employed to achieve total quality management in university education from the point of view of university students from the Republic of Palestine (an Iraqi study)[4]	Study Title
<ul style="list-style-type: none"> Teachers still view e-learning and its applications and tools as redundant matters that are not a priority to spend time or effort on to prepare and communicate with their students outside the classroom. Taking the opinions of university students from the Palestinian Republic on the quality of using e-learning in university education in Iraq Descriptive approach 	Study problem Objectives of the study Study Methodology Study Tools Conclusions
<ul style="list-style-type: none"> A questionnaire consisting of (12) items All paragraphs have obtained a percentage weight higher than 97%, and it must be noted that the employment of e-learning achieves total quality management in the educational process in Iraqi universities, according to the point of view of university students from the Palestinian Republic. 	Study Title Study problem
<ul style="list-style-type: none"> The role of the marketing information system in activating total quality management [5] The role of the marketing information system in activating total quality management, and what is the nature of this in the Cement Corporation – Tebessa 	Objectives of the study Study Study Tools Conclusions
<ul style="list-style-type: none"> Knowing the role of the marketing information system in activating total quality management in the cement corporation 	Study Title
<ul style="list-style-type: none"> Analytical Methodology Case Study Questionnaire 	Study problem
<ul style="list-style-type: none"> The existence of a statistically significant positive relationship between the marketing information system and the total quality management of the institution under study 	Objectives of the study
<ul style="list-style-type: none"> Influence of Organizational Culture on Total Quality Management Implementation in the Australian Construction Industry [6] 	Study Methodology Study Tools Conclusions
<ul style="list-style-type: none"> Explores the relationship between organizational culture and the application of Total Quality Management (TQM) in Australia 	Study Title
<ul style="list-style-type: none"> The link between organizational culture and the implementation of Total Quality Management (TQM) in relation to CVF in the Australian construction industry, and the distinction of cultures that determine the successful implementation of Total Quality Management 	Study problem Objectives of the study
<ul style="list-style-type: none"> Analytical approach Questionnaire and Approved Organizational Culture Assessment Tool (OCAI) 	Study Methodology Study Tools Conclusions
<ul style="list-style-type: none"> Organizations dominated by hierarchical cultural characteristics can provide an unfavorable environment for the successful application of TQM. While an organization that gets a mix of cultures, especially with saturation dominance and market cultures, can provide a favorable environment for the successful application of TQM 	Study Title
<ul style="list-style-type: none"> The Impact Of Total Quality Management, Supply Chain Management Practices And Operations Capability On Firm Performance [7] 	Study problem Objectives of the study
<ul style="list-style-type: none"> It enables organizations to achieve a high level of performance, depending on their internal capabilities. Examine and explain the structural relationship between operational capability, total quality management, supply chain practices, and operational performance. 	Study Methodology Study Tools Conclusions
<ul style="list-style-type: none"> Survey Method Questionnaire 	Study Methodology Study Tools Conclusions
<ul style="list-style-type: none"> There are some limitations to studying as well. The conceptual model proposed in this study did not take into account performance in different aspects; variables were not considered, including market structure. 	

3. Theoretical Aspect

3.1. Concept and definition of total quality management

Total quality management is a modern management philosophy that imposed itself during the nineties. It has become a method followed by organizations, especially industrial ones, and an approach to competition and survival in the markets. And this method has achieved great success for the organizations that have followed it, as the pursuit of customer satisfaction, continuous improvement in performance, and working as a team has become the main feature of work not only in for-profit organizations, but in all types of organizations, including those that are not primarily for profit [1]. In recent decades, organizations have focused more on total quality management due to its practical impact on the business world [2]. Total quality management requires focusing on three aspects: the need for senior management to participate directly with employees, and senior management away from considering total quality management as a work program, but rather it is an ideal way to manage the organization and achieve current and future customer satisfaction [3]. Managing the organization to achieve excellence in all aspects of the business by providing the necessary products to customers [8]. A process of continuous change is based on the wishes of customers that are constantly changing and, therefore, based on the philosophy of continuity [9].

3.2. Objectives of total quality management

They pointed out that TQM seeks to achieve a set of objectives that can be clarified as follows [10, 11] :

- Meet the requirements of the market by providing goods and services in the best way.

- Please respect the time factor when providing goods and services to customers, as they are provided on time to customers, so that he does not feel bored.
- Customers are persuaded by providing them with the best goods and services.
- Reduce work tasks for workers by not giving them more responsibilities than they can handle, as it makes workers feel interested and safe.

3.3. The concept of applying TQM requirements

To ensure the successful implementation of TQM, a change must be made in the way the organization works, and work to change organizational processes and organizational culture [12]. In order to be possible and effective, senior management must adhere to and provide quality experts with the basic assumptions of the philosophy and management of total quality. Quality is the result of all activities within the organization [13]. In 1986, Juran presented a more detailed vision of quality initiatives in his trilogy and added three stages of effective management of total quality management, which are quality planning, quality control, and quality improvement. And Juran stated that these stages should be completed to help reduce waste in operations. They also constantly repeat these stages to carry out continuous improvement processes [14,15].

3.4. Requirements for the application of total quality management

referred to these requirements as follows [16, 17]:

- Continuous improvement: The emergence of continuous improvement dates back to Japan, as it was applied in Toshiba in 1946, in Toyota in 1951, and in Matsushita Electric in 1955, and this concept has evolved due to the urgent need of Japan to differentiate in the world markets [10].
- The requirement for full participation of working individuals: This requirement is one of the fundamental pillars that must be adopted to apply the total quality management approach, as collective participation is an effective tool to identify problems and find solutions to them through direct communication between the different departments in the organization.
- The customer is the focus of the organization's work and its driving force: The customer is the goal and goal of the organization, and therefore the organization must respond to the new needs of customers, and thus total quality management works to put the customer in its priorities, as it is the main engine for all operations in the organization, the organization that does not meet the needs of customers is not able to grow and there is no difference in the customer's internal or external.
- Education and training: Training and education are two of the most essential requirements that fall on the shoulders of operations managers while building the organization and workforce [8].
- Decision making based on facts: The application of TQM requirements needs a strategic plan consisting of the organization's vision, mission and goals, which are based on facts and data and not on personal opinions to be correct decision-making and not based on routine procedures in an rapidly changing world and moving forward conditions, as decisions must be Clear, precise and carefully designed for their time and place [18].
- Administrative leadership: Leadership is defined as the ability to inspire workers with a voluntary commitment and voluntary desires in order to achieve organizational goals, as inspiration is a more commonly used concept in the definition of leadership, so leaders should be able to overcome resistance and develop a positive model consistently, and apply positive influence, and withstand criticism, build consensus, communicate effectively, and convince subordinates to go to what they are not ready to go to. [19]
- Supplier Participation: Total Quality Management focuses on external suppliers, so it is necessary to establish strong relationships and links with suppliers that lead to gaining their loyalty to the organization, and a commercial and technical database is formed about their obligations to the organization.
- Strategic planning: It is one of the means to achieve the future direction of the organization and an entrance to get it out of the routine to renewal, and deal with its challenges and variables with confidence, and the Quality Council has developed the strategic planning for the possibility of adapting it according to (TQM) because it is the first step to lead the organization towards decision-making and achieving goals with high quality [20].
- Error prevention: Quality management applies the principle that prevention is better than treatment by focusing on addressing problems related to the causes of deviation to ensure that these deviations do not occur.
- Work teams: Work teams are one of the basic methods that help the organization to spread the philosophy of TQM and improve performance levels to reach excellence [21].
- Performance evaluation: Performance evaluation is one of the basics of total quality management, as no organization can apply continuous improvement methods or programs without returning to the evaluation results, and performance evaluation helps to motivate units and individuals in the organization to achieve the planned goals [19].
- Measurable quality: Statistical techniques can be used for measurement and analysis purposes, such as control panels, graphs, histograms, scatter charts, process analysis charts, checklists, the Takahashi function, and the quality propagation function.

4. Practical Side

4.1. Research methodology and statistical methods used

The research relied on the case study approach and the comparative approach, which depends on field experience, observations, personal interviews with individuals at different levels to obtain accurate information, and by accessing secondary data provided by the hospital, such as documents, records, and administrative orders. In order to achieve the process of analyzing the data obtained, and to obtain the highest level of accuracy, the heptathlon scale was relied upon, to identify the extent to which the actual application of the total quality management standards conforms to a sample of hospitals, as the examination lists were prepared and included five main criteria (senior management support, customer focus, work teams, training, a specific weight has been allocated to each paragraph and according to the level of application, and Table 2 shows the different paragraphs. For the scale as well as the gradation of weights for these paragraphs, which range between the weight (6) Fully applied, fully documented, weight (5) fully applied, partially documented, weight (4) fully applied, undocumented, weight (3) partially applied, fully documented, weight (2) partially applied, partially documented, weight (1) partially applied, undocumented, and weight (0) unapplied and undocumented, to show the actual Reality of the gaps in the hospital. The statistical tools below were used to measure paragraphs for the application of total quality management after determining the grades for each paragraph in light of the answers to the examination lists. The following equations were adopted as follows [22, 23]:

Calculating the approximate rate of the extent to which the implementation and actual documentation conform to the requirements of the seventh item of the standard in the Department of Engineering Reconstruction of the study sample in comparison with the requirements of TQM by extracting the weighted arithmetic mean, according to the following equation:

$$\text{Weighted arithmetic mean} = \frac{\sum(\text{frequencies} \times \text{weights})}{\sum \text{frequencies}} \quad (1)$$

- The percentage of conformity of the application and the actual documentation of the requirement in the Department of Engineering Construction with the standard specification, according to the following equation:

$$\text{Percentage of conformity} = \frac{(\sum(F \times W) / \sum F) \times 6}{6} \quad (2)$$

As the highest weight in the triangular scale is (2) degrees, it represents the state of complete conformity with the requirements of the guiding specification.

- Calculate the size of the gap through the following equation:

$$\text{Gap size} = 1 - \text{percentage of conformity} \quad (3)$$

Table 2. Heptagonal scale of conformity with the standard (degree) [23]

Sequence	Paragraphs Scale	Paragraph Weight
1	Fully applied and fully documented	6
2	Fully applied and partially documented	5
3	Fully applied and undocumented	4
4	Partially applied and fully documented	3
5	Partially applied and partially documented	2
6	Partially applied and undocumented	1
7	Not applied and undocumented	0

4.2. Application of total quality management standards

The research seeks to present and analyze the results of the field research for the examination list based on the answers obtained by the researcher from personal interviews and access to records and documents related to the standards of total quality management for a sample of hospitals to reach the arithmetic mean. To find out the real rate of the extent to which the standards are applied and the application gap for each paragraph of the examination list, at the total level of the principal axes. In this section, the results of the requirements of the application of total quality management are measured and presented. This study relied on the checklist with a heptagonal weight of the lowest weight (0) to the highest weight (6), and then the researcher multiplies the weights by the sum of the frequencies to extract the weighted arithmetic mean, and to determine the percentage of matching and extract the gap for each of the five dimensions, and the analysis summary of the examination list.

The researcher chose (2) hospitals, (1) of which is a government hospital and (1) a private hospital in Baghdad province as the site for conducting the study, and these hospitals are (Ibn al-Bitar government hospital in the Salhiya area in Baghdad and the private Olive Hospital in Harithiya in Baghdad).

4.2.1 The Reality of the application of each dimension of total quality management

4.2.1.1 The Reality of application after the support of senior management

The examination list in Table 3 shows the extent of implementation and actual documentation of the axis of supporting senior management in the surveyed hospitals.

Table 3. Senior Management Support Axis Checklist

S	Senior Management Support Pillar	Ibn Al, Bitar Hospital	Zaitoun Hospital
1	The senior management of the hospital believes in the need to apply quality in all its departments	4	2
2	The senior management of the hospital sets a clear set of quality objectives for its departments	2	2
3	The senior management of the hospital has a written and clear quality policy	1	2
4	The senior management is committed to the work policy that it has approved to achieve quality	1	2
5	The senior management of the hospital spreads the quality policy among the employees	1	2
6	The senior management of the hospital follows up on the implementation of the established quality policy	1	2
7	There is a positive participation of senior management in the implementation of the quality policy	1	6
	Weighted arithmetic mean	1.6	2.6
	Percentage of matching extent	27%	43%
	Gap size (%)	73%	57%

Analysis: Through the results of the analysis list in Table 3, it is clear that the level of application and actual documentation of the axis (support of senior management) that Ibn Al-Bitar Hospital achieved an arithmetic mean of (1.6) out of (7) degrees, with a matching rate of (27%), which indicates that the size of the gap is equal to (73%), then comes Al-Zaytoun Hospital, which achieved an arithmetic mean of (2.6) out of (7) degrees, with a conformity rate of (43%), which indicates the existence of the size of the gap equal to (57%), and it is shown from Results of Axis Analysis Lists (Senior Management Support)

4.2.1.2. The presence of strengths and weaknesses

in Ibn Al-Bitar Governmental Hospital and Al-Zaytoun Private Hospital is as follows:

- Bitar Hospital Strengths

The strengths of Ibn Al-Bitar Hospital are that the senior management believes in the need to apply total quality management in all its departments because of its importance in raising the level of performance, reducing costs, working to improve and develop work procedures and methods, and increasing the loyalty of employees to the hospital.

Weakness: The failure of the senior management in the hospital to determine the quality goals of its departments, which contribute to the development of services provided, to achieve a reduction in costs, reduce time, and wasted effort to improve the service provided to

customers, and gain their satisfaction. The senior management of the hospital does not have a written and clear quality policy, which is one of the first things that must be done when implementing the quality management system, which is based on the hospital's commitment to providing services that meet the needs of customers and other beneficiaries.

- Zaitoun Hospital

Strengths: The strengths of Al-Zaitoun Hospital are the positive participation of senior management in the implementation of the quality policy, which means sending a message to customers about the quality of the management system in the hospital and the level at which it operates to determine the duties of management.

Weakness: The senior management in the hospital does not believe in the need to apply quality in all its departments, which leads to the lack of successful application of total quality management. The failure of the senior management in the hospital to determine the quality goals of its departments, which contribute to the development of services provided, to achieve a reduction in costs, reduce wasted effort and time to improve the services provided to customers, and gain their satisfaction. The senior management of the hospital does not have a written and clear quality policy, which is one of the first things that should be done when implementing the quality management system, which is based on the hospital's commitment to providing services that meet the needs of customers and other beneficiaries.

4.2.1.2. Reality of the dimension of the customer-centric focus

The checklist in Table 4 shows the extent of implementation and actual documentation of the customer-focused focus in the surveyed hospitals.

Table 4. Customer-focused checklist

S	Customer Focus	Ibn Al, Bitar Hospital	Zaitoun Hospital
1	Customer needs are the starting point for defining the hospital's vision and mission.	5	5
2	The hospital seeks to identify the needs of customers when formulating the strategy	5	5
3	The hospital deals with customers' suggestions and complaints with high attention	6	3
4	The hospital seeks to know the opinions of customers about its services on an ongoing basis	6	6
5	Information about customers is managed in an organized manner, manually or using a computer	5	6
	Weighted arithmetic mean	5.4	5
	Percentage of matching extent	9%	83%
	Gap size (%)	91%	17%

Analysis: Through the results of the analysis list in Table 4, it is clear that the level of application and actual documentation of the axis (customer focus) is that Ibn Al-Bitar Hospital achieved an arithmetic mean of (5.4) out of (7) degrees, with a matching rate of (9%), which indicates that the size of the gap is equal to (91%), then comes Al-Zaytoun Hospital, which achieved an arithmetic mean of (5) out of (7) degrees, with a matching rate of (83%), which indicates a gap equal to 17%. The results of the analysis list for the axis (customer focus) indicate the existence of strengths and weaknesses in Ibn Al-Bitar Governmental Hospital and Al-Zaytoun Private Hospital, as follows:

- Ibn Al, Bitar Hospital

Strengths: The hospital seeks to identify the needs of customers when formulating the strategy. The hospital deals with customer suggestions and complaints with high attention in order to meet customer requests, satisfy their desires, and ensure continuous improvement of the quality of services provided. The hospital seeks to identify the opinions of customers in its services on an ongoing basis through opinion polls that provide the necessary information about the needs of customers and know the reasons that push them or the desires, needs or problems they want to solve, or through the use of social networking programs that enable communication with customers through comments, messages and interaction on publications, which enables the hospital to determine the needs of customers at present and what they want. Information related to customers is managed in an organized manner manually or using a computer.

- Zaitoun Hospital

Strengths: The hospital seeks to identify the needs of customers when formulating its strategy. Information about customers is managed in an organized manner, either manually or by computer.

Weakness: The hospital does not care about dealing with customer suggestions and complaints.

4.2.1.3. The Reality of the application dimension of the work teams

The examination list in Table 5 shows the extent of implementation and actual documentation of the work teams in the surveyed hospitals.

Table 5. Work Teams Axis Checklist

S	Customer Focus	Ibn Al, Bitar Hospital	Zeitoun Hospital
1	Employees at all levels of the organization contribute to improving the quality of service provided	2	5
2	Employees have the authority to make decisions related to their work	5	3
3	Employees are involved in decision-making	1	1
4	The hospital develops a comprehensive plan to train employees on the application of the principles of total quality management	2	3
5	There is an effective communication network between senior management and employees	3	1
6	There are mechanisms to motivate workers towards providing creativity	0	0
	Weighted arithmetic mean	2.2	2.2
	Percentage of matching extent	36%	36%
	Gap size (%)	64%	64%

Analysis: Through the results shown in the analysis list in Table 5, it is clear that the level of application and actual documentation of the axis (work teams) that Ibn Al-Bitar Hospital achieved an arithmetic mean of (2.2) out of (7) degrees, with a matching rate of (36%), which indicates that the size of the gap is equal to (64%), then comes Al-Zaytoun Hospital, which achieved an arithmetic mean of (2.2) out of (7) degrees, with a matching rate of (36%), which indicates the existence of the gap size equal to (64%). Through the results of the analysis lists for the axis (work teams) it is clear that there are strengths and weaknesses in Ibn Al-Bitar Governmental Hospital and Al-Zaytoun Private Hospital, as follows:

- Ibn Al, Bitar Hospital

Strengths: Employees have decision-making powers related to their work, which leads to speeding up decision-making processes by reducing time, increasing creative and innovative ability, achieving job satisfaction, and obtaining a greater perception of achievement for their work.

Weakness: Employees may fail to contribute to improving the quality of service provided. The hospital does not develop a comprehensive plan to train employees to apply the principles of total quality management. There is no effective communication network between senior management and employees, which in turn helps to increase motivation by informing employees about the task they have to do and the way in which they perform the task. There are no mechanisms to motivate employees to be creative.

- Zaitoun Hospital

Strengths: Employees at all administrative levels contribute to improving the quality of services provided.

Weakness: Employees do not have the authority to make decisions related to their business. The hospital does not develop a comprehensive plan to train employees to apply the principles of total quality management. There is no effective communication network between senior management and employees, which in turn helps to increase motivation by informing employees about the task they have to do and the way in which they perform the task.

4.2.1.4. The Reality of the application after the training axis

The examination list in Table 6 shows the extent of implementation and actual documentation of the training axis in the surveyed hospitals.

Table 6. Training Axis Checklist

Training Focus		Ibn Al, Bitar Hospital	Zaitoun Hospital
1	Sufficient financial allocations are available for the design and implementation of training programs	6	6
2	The hospital has a training unit equipped with the necessary equipment	6	6
3	Experts are hired to identify training needs	5	6
4	Training and education include all administrative levels in the hospital	5	3
5	The hospital keeps pace with global developments in training programs, a window for modernization	6	6
6	The hospital provides learning opportunities through granting study vacations and sending students abroad	5	3
7	The hospital encourages a culture of continuous learning among employees to generate new knowledge	4	3
Weighted arithmetic mean		5.3	4.7
Percentage of matching extent		88%	78%
Gap size (%)		12%	22%

Analysis: It is clear through the results of the analysis list in Table 6 the level of application and actual documentation of the axis (training) that Ibn Al-Bitar Hospital achieved an arithmetic mean of (5.3) out of (7) degrees, with a matching rate of (88%), which indicates that the size of the gap is equal to (12%), then comes Al-Zaytoun Hospital, which achieved an arithmetic mean of (4.7) out of (7) degrees, with a matching rate of (78%), which indicates the existence of the size of the gap equal to (22%).

The results of the analysis list for the (training) axis indicate the existence of strengths and weaknesses in Ibn Al-Bitar Governmental Hospital and Al-Zaytoun Private Hospital, as follows:

- Ibn Al, Bitar Hospital

Strengths: Sufficient financial allocations are available for the design and implementation of training programs because of their significant role in improving the ability and efficiency of employees. The hospital has a training unit equipped with the necessary equipment. Experts are used to identify training needs because of their active role in achieving quality by developing the skills of workers to improve the service provided to customers. Training and education include all administrative levels in the hospital. The hospital keeps pace with global developments in training programs as a window for modernization. The hospital encourages a culture of continuous learning among employees to generate new knowledge and provides learning opportunities through granting study leaves and dispatching employees outside the country.

- Al Zaitoun Hospital

Strengths: There are sufficient financial allocations to design and implement training programs because of their significant role in improving the ability and efficiency of employees and strengthening the relationship between senior management and employees. The hospital has a training unit equipped with the necessary equipment, and experts are used to determine training needs, as quality is a comprehensive collective process that considers training and development basics stemming from the development of workers' productivity. Weakness

Training and education do not include all administrative levels in the hospital. The hospital does not provide learning opportunities through granting study vacations and sending students abroad. The hospital does not encourage a culture of continuous learning among employees to generate knowledge for them.

4.2.1.5. The reality of application after the axis of continuous improvement

The examination list in Table 7 shows the extent of implementation and actual documentation of the axis of continuous improvement in the surveyed hospitals.

Analysis: It is clear through the results of the analysis list in Table 7 the level of application and actual documentation of the axis (continuous improvement) that Ibn Al-Bitar Hospital achieved an arithmetic mean of (3.7) out of (7) degrees, with a matching rate of (62%), which indicates that the size of the gap is equal to (38%), then comes Al-Zaytoun Hospital, which achieved an arithmetic mean of (3) out of (7) degrees, with a matching rate of (50%), which indicates the existence of the gap size equal to (50%).

Table 7. Continuous Improvement Axis Checklist

S	Continuous Improvement Pillar	Zaitoun Hospital	Ibn Al, Bitar Hospital
1	The hospital adopts a philosophy of continuous improvement to address challenges	5	5
2	All departments of the hospital are subject to continuous improvement	2	5
3	The hospital is keen to train its employees to qualify them for continuous improvement	4	4
4	The hospital is keen to develop the employees' sense of the importance of continuous improvement	2	4
5	The hospital promotes self-evaluation processes to achieve continuous improvement goals.	2	2
6	The hospital trains leaders to form teams for the continuous improvement process	0	1
7	The hospital seeks to improve its operations by benchmarking with leading hospitals	6	5
	Weighted arithmetic mean	3	3.7
	Percentage of matching extent	50%	62%
	Gap size (%)	50%	38%

The results of the analysis for the axis of (continuous improvement) indicate the existence of strengths and weaknesses in Ibn Al-Bitar Governmental Hospital and Al-Zaytoun Private Hospital, as follows:

- Ibn Al, Bitar Hospital

Strengths: The hospital adopts the philosophy of continuous improvement to meet the challenges, which includes several stages, starting from planning, which includes searching for problems, then collecting information related to them, doing their analysis, implementing plans, and then evaluating the results and determining the success or failure of these plans in preparation for taking appropriate measures for development. All departments of the hospital are subject to continuous improvement. The hospital seeks to improve its operations by making a reference comparison with leading hospitals, which is one of the methods of improving and developing performance by sharing knowledge and development.

Weakness: Weak hospital procedures to train employees to qualify them for continuous improvement. The weakness of the hospital's keenness to develop employees' sense of the importance of continuous improvement and training leaders to form work teams to complete the continuous improvement process. Poor interest in the self-evaluation process to achieve the goals of continuous improvement.

- Zaitoun Hospital

Strengths: The hospital adopts the philosophy of continuous improvement to meet the challenges, which is one of the pillars of total quality management that needs to encourage the support of senior management through appropriate moral and material incentives. The hospital improves its operations by conducting benchmarking with leading hospitals, which is an organized method that seeks to learn from others by observing the distinguished models and methods of performance of hospitals with which a comparison can be made legally.

Weakness: Not all departments in the hospital undergo continuous improvement. The weakness of the hospital's keenness to train its employees to qualify them for continuous improvement and develop their sense of importance. Weak interest in the hospital's self-evaluation processes, through which its location and journey towards excellence can be determined, as the outputs of self-assessment are the main entrance to the continuous improvement process. Poor training of leaders to form work teams for continuous improvement.

4.2.2. Application ratios and gap size for each of the surveyed hospitals

The conclusion of the results of measuring the gap between the Reality of the quality management system and its requirements in hospitals (government and private), which represent the limits of the spatial study, can be clarified as follows:

4.2.2.1. Ibn al-Bitar Hospital

Table 8 shows the summary of the results of measuring the gap between the Reality of the quality and efficiency of Ibn Al-Bitar Hospital and the requirements of total quality management

Table 8. Conclusion: Results of measuring the gap between the Reality of the quality and efficiency of Ibn Al-Bitar Hospital and the requirements of TQM

Axes titles according to the requirements of total quality management		Evaluation grades for application and actual documentation		
S	Axes	Arithmetic mean	Match %	Gap size (%)
1	Total rate of senior management support	1.6	27%	73%
2	Overall customer focus rate	5.4	9%	91%
3	Total rate of the work team's axis	2.2	36%	64%
4	Total rate of the training axis	3.5	88%	12%
5	Overall rate of continuous improvement axis	3.7	62%	38%
	Overall rate of evaluation results	3.28	44.4%	55.6%

The results contained in Table 8 indicate that there is a gap between the actual Reality of application and documentation in Ibn Al-Bitar Hospital and the requirements of total quality management, which was a total rate of (55.6%) and the percentage of application and total documentation in the hospital reached (44.4%), as the axis (training) recorded the highest percentage of conformity and reached (88%) while the axis (focus on the customer) recorded the lowest matching rate of (9%) Thus, the hospital should improve the negative results and strive to enhance the positive results as shown in Fig. 1.

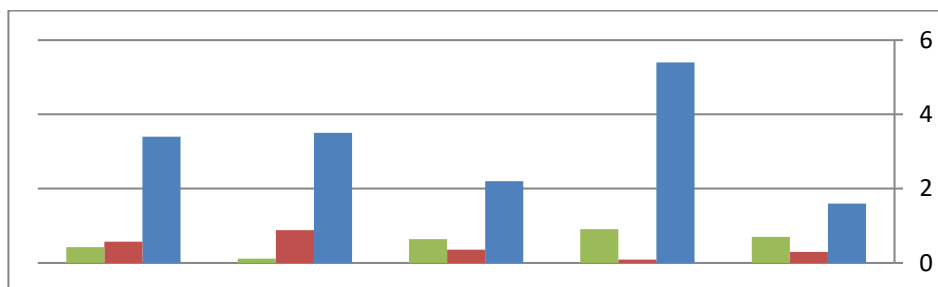


Fig. 1. Total gap size and conformity ratio in Ibn Al-Bitar Hospital according to the requirements of total quality management

4.2.2.2. Zeitoun Hospital

Table 9 the summary of the results of measuring the gap between the Reality of the quality and efficiency of Al-Zaytoun Hospital and the requirements of TQM.

Table 9. Summary of the results of measuring the gap between the Reality of the quality and efficiency of Al-Zaytoun Hospital and the requirements of TQM

Axes titles according to the requirements of total quality management		Evaluation grades for application and actual documentation		
S	Axles	Arithmetic mean	Match %	Gap size(%)
1	Total rate of senior management support	2.6	43%	57%
2	Overall customer focus rate	5	83%	17%
3	Total rate of the work team's axis	2.2	36%	64%
4	Total rate of the training axis	4.7	78%	22%
5	Overall rate of continuous improvement axis	3	50%	50%
	Overall rate of evaluation results	3.5	58%	42%

The results in Table 9 indicate that there is a gap between the actual Reality of application and documentation at Al-Zaytoun Hospital and the requirements of total quality management, which amounted to (42%) and the percentage of application and total documentation in Ibn Al-Bitar Hospital reached (58%), where the (customer focus) axis recorded the highest matching rate of (83%) while the (Customer Focus) axis recorded the lowest conformity rate of (43%) Total rate of senior management support, so the laboratory should improve the negative results and strive to enhance the positive results as shown in Fig. 2.

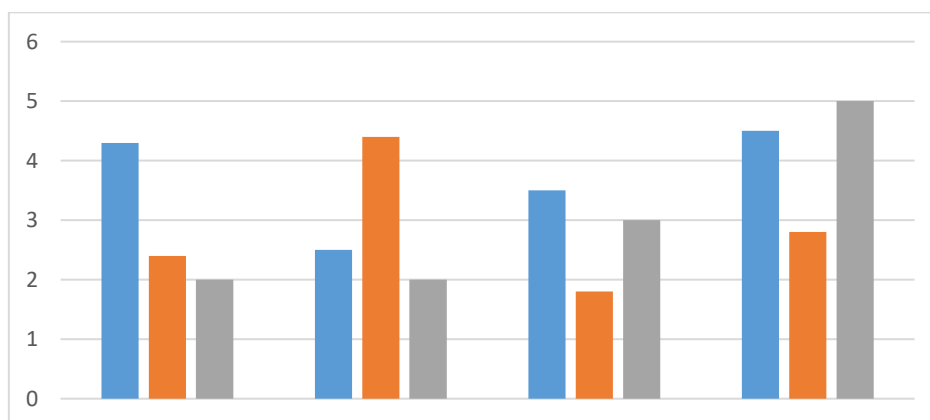


Fig. 2. The total gap size and conformity ratio in Al-Zaytoun Hospital according to the requirements of total quality management
Source, prepared by the researcher based on the above sources

5. Conclusion

- Weak interest by the surveyed hospitals in applying the requirements and items of total quality management in hospitals, which is due to the lack of orientation to implement the quality management system, as well as the lack of availability of financial allocations and the necessary support from senior management to approve it.
- Total Quality Management requirements contributed to diagnosing strengths and weaknesses according to the five axes (support of senior management, customer focus, work teams, training, continuous improvement).
- In the hospitals surveyed, there is an internal communication system through which information related to the medical and administrative aspects is exchanged with all administrative departments. Communication with external parties is done according to official correspondence, the hospital website, and e-mail.
- There is no documented policy or guide in the quality management system in the surveyed hospitals that complies with the requirements of total quality management.
- The hospitals surveyed lack the adoption of the method of secondment of employees to exchange experiences and cooperation among them

6. Recommendations

- The hospital administration needs to bear complete responsibility for the effectiveness and efficiency of the quality of total quality management requirements, as well as being directly responsible for determining the needs of patients and beneficiaries, as well as for social responsibility.
- Providing appropriate training for employees in both public and private sector hospitals and equipping them with appropriate medical resources and devices to support patients with special needs.
- The hospital administration should be aware of and support the establishment, implementation, and maintenance of the quality management system.
- Building an internal audit team for the purpose of conducting audits of the quality and efficiency system of hospitals to determine their compliance with the requirements of total quality management.
- Adopting the method of documentation and drafting a procedures manual for each hospital in the field of total quality management requirements, as well as a policy and objectives for each hospital, especially those requirements, through which it clarifies the hospital's commitment to continuous improvement, customer focus, and senior management support.
- Increase the support provided to patients in all respects in order to create a healthy environment and a suitable atmosphere for them by paying attention to infrastructure, communication, advice and advice, as well as providing electronic training courses to enhance their skills and abweaknessin the field of conducting medical examinations and the availability of virtual laboratories for them if possible to increase the effectiveness of the analysis process.

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